3Com® Switch 4200G Gigabit Family

DATA SHEET

Highly affordable, entry-level managed Gigabit connectivity for medium-sized businesses and branch office networks

OVERVIEW

The 3Com® Switch 4200G family delivers quad-speed performance–10/100/1000 and 10-Gigabit–with plug-and-play "Gigabit-to-the-Desktop" switching and rich, easy-to-use features perfect for cost-conscious medium-sized businesses wanting a fast, efficient network upgrade.

Layer 2 switching along with Layer 3 static routes make these ideal for wiring closet, workgroup connectivity. For great flexibility, four of the ports are dual-personality, operating either as 10/100/1000 or SFP-based fiber. These switches accommodate one or two extra optional 10-Gigabit high-speed links, enabling connectivity to a core network or to high-performance servers. Enterprise-class security features include IEEE 802.1X network login, SSH/SSL encrypted device log-in and Access Control Lists. These switches come with a lifetime warranty and with next business day, advanced hardware replacement in most regions.

Family switch models—clusterable in any combination up to sixteen units—are:

- 3Com Switch 4200G 12-Port:
  8 auto-negotiating 10BASE-T/100BASE-TX/1000BASE-T ports configured as auto-MDI/MDIX; 4 dual-personality 10/100/1000 or SFP Gigabit ports; 1 10-Gigabit slot
- 3Com Switch 4200G 24-Port:
  20 auto-negotiating 10BASE-T/100BASE-TX/1000BASE-T ports configured as auto-MDI/MDIX; 4 dual-personality 10/100/1000 or SFP Gigabit ports; 2 10-Gigabit slots
- 3Com Switch 4200G 48-Port:
  44 auto-negotiating 10BASE-T/100BASE-TX/1000BASE-T ports configured as auto-MDI/MDIX; 4 dual-personality 10/100/1000 or SFP Gigabit ports; 2 10-Gigabit slots

KEY BENEFITS

AFFORDABLE MANAGED GIGABIT CONNECTIVITY

The Switch 4200G family is 3Com's most economical Gigabit managed stackable switch line. Achieve up to a 10-times performance improvement with Gigabit, at prices many still associate with 10/100 switches.

from top: 3Com Switch 4200G 12-Port, Switch 4200G 24-Port, Switch 4200G 48-Port

KEY BENEFITS
(CONTINUED)

FUTURE PROOF NETWORKING

3Com Switch 4200G switches provide outstanding investment protection by providing quad-speed 10/100/1000 Mbps and 10-Gigabit switching. Gradually move users to Gigabit speeds, with full backward compatibility with slower 100 Mbps and 10 Mbps networking.

Switch 4200G models support 10-Gigabit uplinks to tie into an evolving core network infrastructure. They are XENPAK transceiver ready, requiring no additional module for 10-Gigabit XENPAK support. A module for 10-Gigabit XFP support is also available.

EMPOWERS APPLICATION CONVERGENCE

The Switch 4200G family combines high performance Gigabit switching, QoS and traffic management features to help ensure essential applications get the appropriate priority for efficient utilization of network resources.

ENHANCES MANAGEMENT AND CONTROL

The Switch 4200G family is easy to use and manage, designed to increase business productivity by reliably supporting business applications. Cluster together up to 16 devices for easy administration, with single IP management across 3Com switching lines–with mixed clusters of Switch 4200G and Switch 5500 switches.

DELIVERS HIGH PERFORMANCE

No need to buy new switches when additional network performance is needed, as the Switch 4200G family features 12-, 24- and 48-port models, providing aggregate switching capacity up to 136 Gbps and 101.2 Mpps performance on the 48-port model.

GIVES FLEXIBLE, BASIC LAYER 3 ROUTING

Layer 3 static routing, with 32 definable static routes, gives this switch added flexibility to handle more complex networking needs.

SUPPORTED BY LIMITED LIFETIME HARDWARE WARRANTY

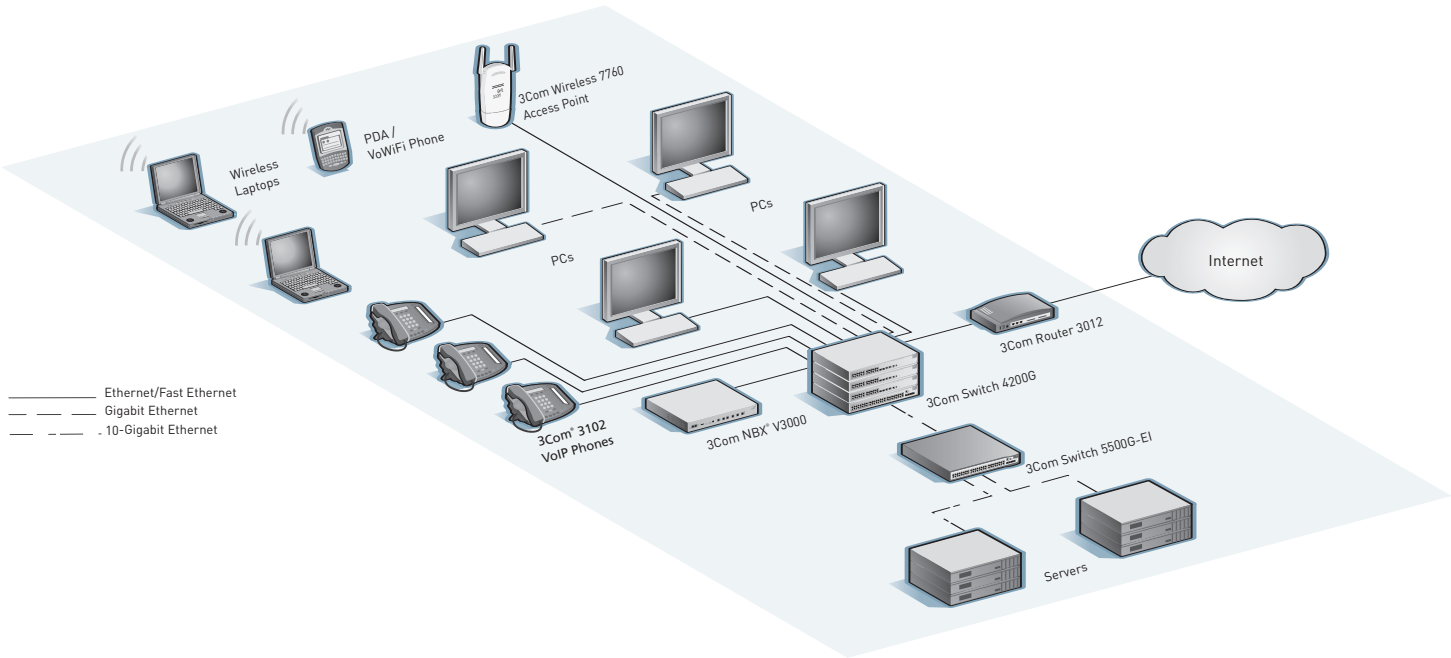
3Com gives a Limited Lifetime Hardware Warranty on the Switch 4200G 10/100/1000 Family. Advance Hardware Replacement, with Next Business Day shipment in most regions, is provided upon product registration. See www.3com.com/warranty for details.

FEATURE HIGHLIGHTS

Feature	Description
IEEE 802.1X network access control	Standards-based security combined with RADIUS authentication
RADIUS Authenticated Device Access (RADA)	Authentication of attached devices via MAC address for an additional level of endpoint security
Access Control Lists (ACLs)	Enable usage policies at each point of access to the network via the switch
Bandwidth rate limiting and protocol filtering	Enforce controls on each port for efficient use of network resources and prioritization of delay-sensitive VoIP traffic
"Dual-personality" Gigabit Ethernet interfaces	Choice of copper or fiber media for flexible uplinks
Multicast filtering and Rapid Spanning Tree protocol support	Improve QoS, scalability and network availability
Layer 3 static routing	Gives additional flexibility in deployment to boost network performance
Secure management	Authentication and encryption of management traffic via Secure Shell (SSH v2) and SNMP v3
3Com Operating System	Proven software featured in 3Com premium enterprise switches such as the Switch 5500, 7700 and 8800 families and enterprise routers like the Router 6000, 5000 and 3000 families
Service and Support	Backed by 3Com Global Services and authorized partners with demonstrated expertise in network assessment, implementation and maintenance

The 3Com Switch 4200G 1-Port 10-Gigabit Module (XFP) 3C17666 shown above adds one XFP-based 10-Gigabit port to the rear of a Switch 4200G system as a high-bandwidth link for connections to high speed network backbones or other peer switches or servers. An XFP transceiver, sold separately, is required to support the desired connection's fiber media.

SMALL-TO-MEDIUM LAN CONFIGURATION SUPPORTED BY THE SWITCH 4200G



In the above network, 3Com Switch 4200G and Switch 5500G-EI units are managed as a single cluster.

PRODUCT WARRANTY AND OTHER SERVICES

Warranty	3Com Limited Lifetime Warranty. For as long as the original end user owns the product, or for five years after 3Com discontinues the of sale of the product, whichever occurs first.
Hardware coverage	Covers the complete unit including power supply and fan.
In-warranty hardware replacement*	Advanced Hardware Replacement of hardware for the duration of the warranty. In the US 48 contiguous states this is same-day ship with next business day delivery when call received before noon Pacific time. For Canada, Alaska and Hawaii, this is same-day ship when call received before noon Pacific time. In Western Europe, this is same-day ship when call received before noon Greenwich time. For the rest of the world, it is next-business-day ship. Actual delivery times may vary depending on customer location. Reasonable commercial efforts apply.
Software coverage	90 days for media replacement.
Software updates*	Access to maintenance and bug fix releases for the software version purchased for the duration of the warranty.
Online Knowledgebase support*	Access to online troubleshooting tool for the duration of the warranty.

* These services are not included as part of the Warranty and 3Com reserves the right to modify or cancel this offering at any time, without advance notice. This offering is not available where prohibited by law. Services are effective at warranty start date, and are enabled with product registration. Customers receive a user ID with eSupport registration.

SERVICE AND SUPPORT

3Com Global Services offers the resources and talents of a major corporation plus more than two decades of experience in resolving network challenges and delivering business benefits to enterprises around the world.

Global support with a personalized focus in the local language helps drive productivity and minimize expenses. Because 3Com understands both the technology and the business, we're the partner you need to maintain your competitive edge and remain strong.

Suggested Service, Support and Training Offerings

Network Health Check	An activity-auditing service focused on improving network performance and productivity Includes traffic monitoring, utilization analysis, problem identification, and asset deployment recommendations Extensive report provides blueprint for action
Network Installation and Implementation Services	Experts set-up and configure equipment and integrate technologies to maximize functionality and minimize business disruption For large and complex sites, implementation services include personalized configuration, project management, extended testing and coaching on network administration
Project Management	Provides extra focus and resources that special projects demand 3Com engineers manage entire process from initial specifications to post-project review Using structured methodology, requirements are identified, projects planned and progress of implementation activities tracked
3Com Guardian℠ Maintenance Service	This service provides comprehensive on-site support and includes advance hardware replacement, telephone technical support and software upgrades
3Com Express℠ Maintenance Service	This service provides speedy access to 3Com shipment of advance hardware replacements, software upgrades and telephone support
3Com University	Self-paced and instructor-led technology and product courses, plus certification programs

SPECIFICATIONS

All information in this section is relevant to all members of the 3Com Switch 4200G 10/100/1000 family, unless otherwise stated.

CONNECTORS

12-port

8 auto-negotiating 10BASE-T/100BASE-TX/1000BASE-T ports configured as auto MDI/MDIX

4 dual-personality Gigabit port pairs, configurable as 1000BASE-T or SFP

1 rear slot for direct 10-Gigabit XENPAK transceiver or for 10-Gigabit module (XFP)

24-port

20 auto-negotiating 10BASE-T/100BASE-TX/1000BASE-T ports configured as auto MDI/MDIX

4 dual-personality Gigabit port pairs, configurable as 1000BASE-T or SFP

2 rear slots for direct 10-Gigabit XENPAK transceiver or for 10-Gigabit module (XFP)

48-port

44 auto-negotiating 10BASE-T/100BASE-TX/1000BASE-T ports configured as auto MDI/MDIX

4 dual-personality Gigabit port pairs, configurable as 1000BASE-T or SFP

2 rear slots for direct 10-Gigabit XENPAK transceiver or for 10-Gigabit module (XFP)

PERFORMANCE

12-port

44 Gbps switching capacity (maximum), 32.7 Mpps forwarding rate (maximum)

24-port

88 Gbps switching capacity (maximum), 65.5 Mpps forwarding rate (maximum)

48-port

136 Gbps switching capacity, (maximum), 101.2 Mpps forwarding rate (maximum)

All models

Wirespeed performance across ports in full mesh configuration

Store-and-forward switching; latency <10 µs

LAYER 2 SWITCHING

8,196 MAC addresses in address table

1,024 static MAC addresses (in addition to default address)

256 Port-based VLANs (IEEE 802.1Q)

IEEE 802.3ad Link Aggregation Control Protocol (LACP); automated and manual aggregation

Per-switch trunk groups:

- 6 groups (12-port)
- 13 groups (24-port)
- 25 groups (50-port)

Auto-negotiation of port speed and duplex IEEE 802.3x full-duplex flow control

Back pressure flow control for half duplex

IEEE 802.1D Spanning Tree Protocol (STP)

IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)

Bridge Protocol Data Unit (BPDU) protection

Internet Group Management Protocol (IGMP) snooping on Layer 2 interfaces

Filtering for 128 multicast groups

LAYER 3 SWITCHING

Hardware based routing

32 static routes

CONVERGENCE

Eight hardware queues per port

Weighted Round Robin queuing

Strict Priority queuing

IEEE 802.1p Class of Service/Quality of Service (CoS/QoS) on egress

Traffic shaping with port-based egress rate limiting

Application and protocol blocking

Auto VLAN assignment for voice traffic determined by vendor OUI

SECURITY

IEEE 802.1X Network login user authentication:

- EAP over LAN (EAPoL) transport with EAP-MD5, PAP, CHAP, PEAP and EAP-TLS authentication
- Multiple users per port
- 1024 max online users

Local and RADIUS server authentication

RADIUS session accounting

Automatic VLAN assignment via RADIUS server

Wirespeed packet filtering in hardware

ACLs filter at Layers 2, 3 and 4:

- Source/destination MAC address
- Ethernet type
- Source/destination IP address
- Source/destination TCP port
- Source/destination UDP port

RADIUS Authenticated Device Access (RADA): authenticate devices based on MAC address against RADIUS server and assign VLAN ID and ACL

Port-based MAC address Disconnect Unknown Device (DUD)

IEEE 802.1X user authentication of switch management on switch Telnet and console sessions; four access privilege levels

Hierarchical management and password protection for management interface

SNMP v3 encryption

SSH v2

Denial of Service protection

CLUSTERED STACKING

Single IP address and management interfaces for centralized control

Compatibility with 5500 and 5500G clustering

Up to 16 devices per cluster, or 768 Gigabit front panel ports

MANAGEMENT

CLI via console or Telnet

Embedded web management interface

System configuration with SNMP v1, 2c and 3

Comprehensive statistics, including ACL/QoS and IP interface

Remote Monitoring (RMON) groups statistics, history, alarm and events

Many-to-1 port mirroring

Detailed alarm and debug information

Supports ping, remote ping and traceroute

Configuration file for backup and restore; multiple configuration files available

DHCP Relay and UDP Helper

System file transfer mechanisms: Xmodem, FTP, Trivial FTP (TFTP), Secure FTP (SFTP)

3Com management applications:

- 3Com Enterprise Management Suite for flexible, extensible management in advanced enterprise IT environments
- 3Com Network Director for comprehensive, turn-key network management for the enterprise
- 3Com Network Supervisor for basic, turn-key network management for mid-market businesses
- 3Com Network Access Manager for IEEE 802.1X and RADA integration with IAS/Active Directory
- 3Com Switch Manager for virtual clustering support across 3Com switch families

SPECIFICATIONS
(CONTINUED)

DIMENSIONS
Height: 4.4 cm (1.7 in or 1 RU)
Width: 44.2 cm (17.4 in)
Depth: 30.0 cm (11.8 in)
Weight:
12-port: 3.8 kg (8.4 lb)
24-port: 4.1 kg (9.0 lb)
48-port: 4.7 kg (10.4 lb)

POWER SUPPLY
AC Line Frequency: 50/60 Hz
Input Voltage: 90-240 VAC
Current Rating:
12- and 24-port: 1.5A; 48-port: 2A

ENVIRONMENTAL REQUIREMENTS
Operating temperature: 0° to 40°C (32° to 104°F)
Storage temperature: -10° to 70°C (14° to 158°F)
Humidity (operating and storage): 10% to 95% non-condensing
Standard: EN 60068 (IEC 68)

RELIABILITY
(MTBF @ 25°C)
12-port: 59 years (522,000 hours)
24-port: 48 years (421,000 hours)
48-port: 30 years (261,000 hours)
10-Gigabit module: 75 years (662,000 hours)

IEEE STANDARDS SUPPORTED
IEEE 802.1D Spanning Tree Protocol (STP)
IEEE 802.1p QoS
IEEE 802.1Q VLANs / VLAN tagging
IEEE 802.1s Multiple Spanning Tree
IEEE 802.1w Rapid Spanning Tree
IEEE 802.1X Network Login Security
IEEE 802.3 Ethernet
IEEE 802.3ad Link Aggregation (unit wide)
IEEE 802.3ae 10-Gigabit Ethernet
IEEE 802.3i 10BASE-T
IEEE 802.3u Fast Ethernet
IEEE 802.3x Flow control
IEEE 802.3z Gigabit Ethernet 1000BASE-X

IETF STANDARDS
RFC 768 UDP Helper / Relay
RFC 783 Remote software upgrade TFTP
RFC 791 IP
RFC 792 ICMP Query, support as defined in RFC1812
RFC 793 TCP
RFC 826 Address Resolution Protocol (ARP)
RFC 854 Telnet
RFC 951 BootP Bootstrap Protocol
RFC 1350 Remote software upgrade TFTP
RFC 1519 Classless Inter-Domain Routing (CIDR)
RFC 1812 Compliant "Requirements for IP Version 4 Routers"
RFC 2131 DHCP client
RFC 2236 Internet Group Management Protocol (IGMP) Snooping v2
RFC 2616 HTTP compatibility
RFC 2819 RMON 4 Groups - Stats, History, Alarm, Events (1,2,3,9)

Management, including MIBs Supported
RFC1212 Concise MIB definitions
RFC1215 MIB Monitoring Trap Registration
RFC1213 MIB II
RFC1493 Bridge MIB
RFC2233 IF-MIB
RFC2233 Interfaces MIB
RFC2571 SNMP-Framework-MIB
RFC2572 SNMP-MPD-MIB
RFC2573 SNMP-Notification-MIB
RFC2573 SNMP-Target-MIB
RFC2574 SNMP v3 MIB
RFC2575 SNMP Access Control
RFC2618 MIB BulkConf-RADIUS Servers, BulkConf-Port Security
RFC2620 MIB
RFC2665 EtherLike MIB
RFC2668 MAU MIB
RFC2674 Q-Bridge MIB
RFC2674 P-Bridge MIB
RFC2674 Bridge MIB Extensions
RFC2737 Entity-MIB
RFC2819 RMON I MIB
RFC2863 MIB Disc-Sizing
RFC2925 MIB Discovery, Topology
RFC3414 SNMP-User-based-SM-MIB
RFC3415 SNMP-View-based-ACM-MIB
RFC3418 SNMP v2
IEEE 802.1X MIB
IEEE 802.3ad MIB Disc-Sizing

EMISSIONS / AGENCY APPROVALS
EN 55022 :1998+A1:2000+A2:2003 Class A
FCC Part 15 :2004 Class A
ICES-003 :2004 Class A
VCCI :2004 Class A
CISPR 22 :2003 Class A
IEC61000-3-2:2001/EN61000-3-2 :2000
IEC61000-3-3:2002/EN61000-3-3:1995+A1:2001
Korean EMI Class A

IMMUNITY
EN 55024: 1998+A1:2001+A2:2003

SAFETY AGENCY CERTIFICATIONS
UL 60950-1:2003
EN 60950-1:2001
CSA 2.22 # 60950-1:2003
IEC 60950-1:2001
EU RoHS Compliant

WARRANTY AND OTHER SERVICES
Limited Lifetime Hardware Warranty, including fans and power supply. Limited Software Warranty for 90 days. Refer to **www.3com.com/warranty** for details.

Advance Hardware Replacement with Next Business Day shipment in most regions
90 days of telephone technical support

ORDERING INFORMATION

PRODUCT DESCRIPTION	3COM SKU
3Com Switch 4200G 12-Port	3CR17660-91
3Com Switch 4200G 24-Port	3CR17661-91
3Com Switch 4200G 48-Port	3CR17662-91
3Com Switch 4200G 1-Port 10-Gigabit Module (XFP)	3C17666
Gigabit SFP Transceivers	
3Com 1000BASE-SX SFP	3CSFP91
3Com 1000BASE-LX SFP	3CSFP92
3Com 1000BASE-LH SFP	3CSFP97
10-Gigabit XENPAK Transceivers	
10GBASE-LX4	3CXENPAK91
10GBASE-LR	3CXENPAK92
10GBASE-SR	3CXENPAK94
10GBASE-CX4	3CXENPAK95
10GBASE-ER	3CXENPAK96
10-Gigabit XFP Transceivers	
10GBASE-LR	3CXFP92
10GBASE-SR	3CXFP94
10GBASE-ER	3CXFP96
3Com Global Services	
3Com Network Health Check, Installation Services, and Express Maintenance	www.3com.com/services_quote
3Com University Courses	www.3com.com/3comu

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